Science for a changing world

U.S. Department of the Interior

U.S. Geological Survey

NEWBERRY MESA

TUCKER MESA SW

Prepared in cooperation with the Navajo Nation

VOLCANIC ROCKS

SEDIMENTARY ROCKS

Unconformity

Km

Kd

Unconformity

Jk

Unconformity

Jm Jms

Unconformity

Тср

Tics

Unconformity

Timhm

₹ms

Unconformity

Unconformity

Pc

- Holocene

Pleistocene

Pliocene

- Lower Jurassic

Upper Triassic

Middle(?) and

Lower Triassic

Lower Triassic

- Cisuralian

- QUATERNARY

- CENOZOIC

- MESOZOIC

- PALEOZOIC

- TERTIARY

TERTIARY

– TERTIARY

- JURASSIC

TRIASSIC

PERMIAN

- CRETACEOUS

CORRELATION OF MAP UNITS

LEE MOUNTAIN

HENNESSY BUTTES

Qg4

Volcanic rocks of Hopi Buttes

(Tsezhin Bii) Volcanic Field

SURFICIAL DEPOSITS

Qs Qf Qps Qd Qes Qdl Qdp Qdb Qa1 Qg1 Qf1 Qa2 Qg2 Qf2 Qf3 Qae Qsd Qg3

MONTEZUMAS CHAIR

eles 4

SHONTO BUTTE

MESA

INDEX MAP SHOWING 7.5' QUADRANGLES IN WINSLOW 30' × 60' QUADRANGLE, NORTHERN ARIZONA

Scientific Investigations Map 3247 Sheet 3 of 3

Pamphlet accompanies map

LIST OF MAP UNITS

[See Description of Map Units (in pamphlet) for complete unit descriptions. Quaternary and Tertiary units are positioned only to indicate their general stratigraphic relations]

Tertiary units are positioned only to indicate their general stratigraphic relations			
_		SURFICIAL DEPOSITS	
	Qaf	Artificial fill and quarries (Holocene)	
	Qs	Stream-channel deposits (Holocene)	
	Qf	Modern flood-plain deposits (Holocene)	
	Qps	Ponded sediments (Holocene)	
:	Qd	Dune sand and sand-sheet deposits (Holocene)	
	Qes	Eolian sand-sheet deposits (Holocene)	
	Qdl	Linear-dune deposits (Holocene)	
	Qdp	Parabolic-dune deposits (Holocene)	
	Qdb	Barchan-dune deposits (Holocene)	
	Qa1	Young alluvial fan deposits (Holocene)	
	Qg1	Young terrace-gravel deposits (Holocene)	
	Qf1	Young flood-plain deposits (Holocene)	
	Qa2	Intermediate-age alluvial fan deposits (Holocene)	
	Qg2	Intermediate-age terrace-gravel deposits (Holocene)	
	Qf2	Intermediate-age flood-plain deposits (Holocene)	
	Qf3	Old flood-plain deposits (Holocene)	
	Qae	Mixed alluvium and eolian deposits (Holocene)	
	Qsd	Silt-dune deposits (Holocene)	
	Qg3	Old terrace-gravel deposits (Holocene)	
	Qv	Valley-fill deposits (Holocene and Pleistocene?)	
	Qa3	Old alluvial fan deposits (Holocene and Pleistocene)	
	Qtr	Talus and rock-fall deposits (Holocene and Pleistocene)	
	Ql	Landslide deposits (Holocene and Pleistocene)	
	Qg4	Older terrace-gravel deposits (Pleistocene)	
	QTd	Old sand-dune deposits (Pleistocene and Pliocene?)	
	QTes	Old eolian sand-sheet and dune deposits (Pleistocene and Pliocene?)	
	QTa	Older alluvial fan deposits (Pleistocene and Pliocene?)	
	QTg4	Oldest terrace-gravel deposits (Pleistocene and Pliocene?)	
	QTdi	"Dilkon deposits" (Pleistocene? and Pliocene?)	
	QTs	"Shonto deposits" (Pleistocene? and Pliocene)	
VOLCANIC ROCKS			
		Volcanic rocks of Hopi Buttes (Tsezhin Bii) Volcanic Field (Miocene)	
	Ti _	Intrusive dikes, plugs, or necks (Miocene)	
	Тс	Volcanic-crater sedimentary rocks (Miocene)	

Mafic monchiquite and basanite flows (Miocene)

Mixed monchiquite and basanite flows and tuff deposits, undivided (Miocene)

Mafic tuff-and-ash deposits (Miocene)

SEDIMENTARY ROCKS

Tbl	Lower mudstone and argillaceous sandstone member (Miocene)	
Km	Mancos Shale (Upper Cretaceous)	
Kd	Dakota Sandstone, undivided (Upper Cretaceous)	
	Glen Canyon Group (Jurassic)	
Jk	Kayenta Formation (Lower Jurassic)	
Jm	Moenave Formation (Lower Jurassic)	
Jms	Upper sandstone member (Lower Jurassic)	

Rcp Petrified Forest Member (Upper Triassic)

Rcs Shinarump Member (Upper Triassic)

Chinle Formation (Upper Triassic)

Owl Rock Member (Upper Triassic)

Bidahochi Formation (Pliocene and Miocene)

Moenkopi Formation (Middle? and Lower Triassic)

Holbrook and Moqui Members, undivided (Middle? and Lower Triassic)

Lower massive sandstone member (Lower Triassic)

Pk Kaibab Formation (Cisuralian)

Coconino Sandstone (Cisuralian)

EXPLANATION OF MAP SYMBOLS

— Contact—Contacts between all alluvial and eolian units are approximate and arbitrary

Fault—Dashed where inferred or approximately located; dotted where concealed; bar and ball on downthrown side. Number is estimated fault separation, in meters

Folds—Showing trace of axial surface and direction of plunge; dashed where approximately located; dotted where concealed

- Anticline

Plunging anticline—Showing direction of plunge

____ Syncline

Plunging syncline—Showing direction of plunge

Monoclin

🛟 Dome

Strike and dip of beds

Inclined bedding—Showing strike and dip where measured in the field

Implied bedding—Showing approximate strike as interpreted from aerial photo-

graphs; dip amount not determined

Strike of vertical and subvertical joints—Interpreted from aerial photographs;

symbol placed where joints are most visible on aerial photographs
 Collapse structure—Showing circular collapse structure characterized by strata

dipping inward toward a central point

▲ Sinkhole—Enclosed depression or cave. Sinkholes breached by drainages are not shown

Volcanic vent

Geologic Map of the Winslow 30' x 60' Quadrangle, Coconino and Navajo Counties, Northern Arizona

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